

Response Document

Braskem America, Inc.

Plan Approval No. 23-0012C

Marcus Hook Borough, Delaware County

August 5, 2016

List of Commentators

<i>No.</i>	<i>Contact Name</i>	<i>Company Name</i>	<i>Title/Office</i>
1.	Gerallyn Duke	US EPA	Office of Permits and State Programs
2.	Jeffrey Hirt	Braskem America, Inc.	Lead Environmental Engineer

EPA Comments

1. NNSR Analysis

- a. Step One to the NNSR applicability determination must be delineated. Baseline actual VOC emissions for all affected units must be included and an explanation of the basis for those emissions (CEMs, bases for any emissions factors used, etc.); The Baseline Period must be clear. (January 2014 through December 2015?)

Response

The baseline period is from Oct 2013 through Sept. 2015. The baseline actual emissions are based on actual emissions from that period. The monthly actual emissions and the average annualized emissions are attached to the review memo as Attachments 1 and 2.

- b. The proposed throughput limit of 595,680,000 pounds per year for each plant would establish potential to emit (PTE) for VOC emissions. If PTE is used [and not projected actual emissions (PAE)], no emissions may be excluded in the analysis.

Response

PAE were calculated for this project.

- c. Please provide the calculations used that show the VOC emissions associated with the new PTE limits.

Response

The review memo was revised to explain the PAE, BAE and excludable emissions calculations. The detailed calculations were attached to the review memo (Attachment 3).

- d. Please show how the VOC increase from the project is determined, i.e., PTE minus Baseline Actual Emissions (BAE). Without this information, the NNSR analysis is incomplete and the submission to EPA is incomplete.

Response

See response to Comment 1.c.

2. PSD Analysis

- a. Please identify if the source is a major PSD source so that the reader may ascertain whether the modification is a modification to a major source.

Response

The review memo was revised to state:

“The facility is major for VOC emissions only and located in an ozone marginal nonattainment area. Therefore, this facility is **not** a PSD source.”

- b. Assuming the source is a major PSD source, or if not, to ascertain whether the modification itself is a major source, Step One to the NSR applicability determination must be delineated. The Baseline Period must be identified (January 2014 through December 2015?) BAE for all affected units must be included.

The review memo was revised to state that the source is not a PSD source, and the project is not a major project. The details are explained in the review memo and summarized in the following table.

PSD Step 1 Analysis

Pollutants	NO _x	SO ₂	CO	PM	PM10	H ₂ SO ₄	Lead	CO _{2e}
Increases	0.8	0	3.8	7.9	7.9	0	0	35,915
PSD Significant Level	40	40	100	25	15	7	0.6	75,000
PSD Triggered	No	No	No	No	No	No	No	No

- c. Please provide the calculations used that show the emissions for all NSR regulated pollutants, including PM_{2.5} and excluding VOCs, associated with the BAE and the new PTE limits. (See above comment regarding PTE compared to PAE)

Response

The calculation of PM_{2.5} emission increase from the project is included in PM/PM10 emissions, which is below the significant level of 10 TPY. The baghouses at the facility are operating at atmosphere temperature, and collecting products. PM_{2.5} emissions are not a concern at this facility.

- d. Please show how the increase from the project is determined, i.e., PTE minus Baseline Actual Emissions (BAE). Without this information, the PSD NSR analysis is incomplete and the submission to EPA is incomplete.

Response

The review memo was revised to detail the calculations of PAE, BAE and excludable emissions.

3. CAM – The review memo states that CAM does not apply because the emissions controlled by the flares do not have an emissions standard.
 - a. Flare C02 - Condition #001 to Sources 102a and b in the title V permit specify VOC emissions limits, so the above statement is not correct. The flare is a control device as defined in 40 CFR 64.1. This assertion, even if correct, is not one of the exemptions found at 40 CFR 64.2(b).

Response

Flare C02 is subject to CAM. The review memo was revised to address the CAM applicability and compliance methods to comply with CAM requirements.

- b. Flare C100 – The review memo should state, in the CAM discussion, that the applicability of CAM to the Sunoco flare should be addressed in the DNREC permit. From looking at the DNREC permit, one might conclude that the flare is exempt from CAM because the flare is subject to MACT and NSPS requirements.

Response

This flare complies with 40 CFR §63.11 as per the TVOP issued by DNREC, and is exempt from CAM requirements.

4. The project –
 - a. The permit map is not included in the draft permit and should be, as the map would show which units have controls and how emissions are directed via stacks.

Response

The maps were added.

- b. Because downstream (flares) and upstream (boilers) are affected by the project, we expect that the permits for SPMT in Delaware as well as FPL would be modified. We previously advised that the steam demand is not part of the project because the Braskem facility is not aggregated with FPL. Please note this in the review memo. Also please note, in the review memo, whether DNREC has been informed about this project and whether the FPL permit is being modified accordingly.

Response

The Ethylene Complex Flare (Source ID C100) and Auxiliary Boilers will not be modified, since the increased utilizations are within the existing capacities as part of the project. Both SPMT and FPL are aware of the respective impacts as a result of this project. There are no changes required to the existing operating permits for the boiler. The SPMT flare permit is under current discussion with DNREC.

5. PM₁₀ and PM_{2.5} emissions - Please explain the purpose of and basis for the proposed PM₁₀ emissions limits. Why are PM₁₀ Limits proposed but not PM_{2.5} limits? Depending on the purpose of these limits, a means of assuring compliance with the limits may need to be specified in the plan approval.

Response

See response to Comment 2.c.

6. VOC emissions - We note that the current VOC caps on the production lines in Plants 1 and 2 are not changed. We also note that the current permit allows *The permittee shall calculate the VOC emissions on a monthly basis and 12 month rolling sum, using DEP approved methods*. The methods to assure compliance with the various VOC caps for this facility must be specified in order to make this permit enforceable as a practical matter, i.e., to confirm that the source remains in compliance with the VOC caps.

Response

The Plan Approval was revised. The monitoring and recordkeeping requirements were revised to specify the parameters to be monitored, and methods of emission calculations for each source.

7. HAP emissions – Please identify the HAP PTE, after the proposed change, in the review memo. If this change affects its current minor HAP status, affected applicable MACT requirements should be fully addressed.

Response

The Braskem Marcus Hook Polymers facility is an area source of HAP emissions. The VOC from the facility is not HAP. HAP emissions are from combustion sources only, boilers, flares, and pump engines. The production rate increase will not change the HAP status as an area source.

8. The same production limits on plants 1 and 2 are stated in various conditions, including Condition #2 on pages 11, 14 and 18 and Condition #3 on pages 12, 16 and 20. We recommend that the throughput limit should be set forth once, perhaps in Section C, for brevity/clarity.

Response

These emission limits are source specific, and not a facility wide emission limit. Therefore, it is better to specify them under each source ID.

Braskem's Comments

Comment 1

Source 101B #007(c) – The reference to 40 CFR 60.565(l) and this section require the owner or operator to provide notification of the specific provisions of 40 CFR 60.562 that apply. This source is not being modified as part of this plan approval application. No sections of 60.562 have applied or will now apply to this source due to this application. Specifically, for this source (P2 silo's), Braskem currently meets (and will reconfirm through testing) the exemption to 60.562 -1(a)(1) through the citation in 60.560(g). Sections 60.562-1(b) and 60.562-1(c) only apply to polystyrene and PET processes. Section 60.562-1(d) and 60.562-1(e) do not apply since there are no control devices associated with this source. Sections 60.562-2 do not apply as none of the components in this process section meet the definition of "In VOC service" as described in 60.481. Braskem requests that this section be removed from the plan approval.

Response

As per 40 CFR §60.564(a)(1), whenever changes are made in production capacity, the permittee shall determine compliance with the 40 CFR §60.560(g), and must use as reference methods and procedures in appendix A of 40 CFR 60 or other methods and procedures specified in 40 CFR §60.564(d) for weight percent VOC of the uncontrolled individual vent stream.

The Plan Approval does not reference §§60.562-1(b) through (e) and 60.562-2 for the silos.

Comment 2

Sources 102A(#005)(b) & 102B(#006)(b) – Braskem will submit this semi-annual report as required, but requests that these reports be submitted with the DDD/VV semi-annual reports for source 101B(#007)(b) and similar language be inserted in this section to reflect that these reports will be due March 1 and September 1 each year.

Response

The reporting dates are changed accordingly.

Comment 3

Source 102B (#003) - this condition should be removed similar to what was done with Source ID 102A – Plant 1 Polypropylene MFG Sources.

Response

See response to Comment 1.

Comment 4

Sources 106/107 (#002)(b) - Braskem has not been required to keep separate records of the SXL flare performance through revisions and reissuances of the Title V permit. Braskem requests that PADEP follow the same methodology for this condition and insert the same language, "Data, records, and reports pertaining to the Sunoco Flare (Source ID C100) may be maintained by a third party, but shall be made available by the permittee to the Department within 10 business days upon DEP's request."

Response

Condition (d) was added for both Source IDs 106 and 107.

Comment 5

Sources 106/107 (#002)(c) – This new condition is complicated by the arrangement of Sunoco Logistics owning and operating the associated flare in Delaware. Braskem can monitor changes in production capacity or replacement, removal, or addition of product recovery equipment as listed in (c)(1). However, Braskem cannot conduct a performance test described in 60.564 on the Sunoco Logistics flare as implied in (c)(2) in the state of Delaware. If however, Sunoco Logistics conduct such a test, then Braskem or PADEP could request a copy of this test report similar to the italicized language above in 106/107(#002)(b). Braskem ensures it's materials are properly combusted by Sunoco Logistics being required to maintain compliance with 40 CFR 60.18 through their DNREC Title V permit.

Response

See response to Comment 4.

Comment 6

Sources 106/107(#004) - Similar to the above comment in (#002)(c) above, Braskem cannot conduct a performance test or engineering report on this control device referenced in this section as this is owned and operated by Sunoco Logistics permitted through DNREC. Please remove this condition.

Response

Since Braskem is discussing with DNREC, the reporting requirement will be determined after DNREC makes decision. Braskem may request waiver, if DNREC does not require a performance test for this flare.